

REMARKS

This Amendment is responsive to the Office Action identified above, and is further responsive in any manner indicated below.

PENDING CLAIMS

Claims 1, 2, 4-7, 12-15 and 17-36 remain pending for examination and consideration in this application.

REJECTIONS UNDER 35 USC §103 - TRAVERSED

Applicant respectfully traverses the various rejections of Claims 1, 2, 4-7, 12-15 and 17-36 under 35 USC 103(a) as being unpatentable over various combinations of Lee *et al.* (US 5,808,735 A) Maeda *et al.* (US 5,153,444 A), Michael (US 5,640,200 A), Teo (US 6,128,108 A), Haskell *et al.* (US 6,111,596 A) and Wagner (US 5,659,172 A). Unrelated to any rejection, appropriate claims have been amended to adjust a clarity and/or focus of Applicant's claimed invention. That is, the amendments to the claims are unrelated to any prior art or scope adjustment, and are simply clarified claims in which Applicant is presently interested. Based upon the following, reconsideration and withdrawal of the rejections are respectfully requested.

All descriptions of Applicants disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated herein by reference. Further, all Office Action statements regarding the prior art rejections,

and all Office Action comments based on apparent judicial (*i.e.*, Examiner) notice of common knowledge or well-known art, are respectfully traversed.

To reiterate, the requirements to support a rejection under 35 USC §103 are set out in the decision *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988). The court pointed out that the PTO has the burden under §103 to establish a *prima facie* case of obviousness, and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. However, the cited art does not adequately support a §103 obviousness-type rejection because it does not, at minimum, disclose (or suggest) the following limitations of Applicant's clarified claims.

More particularly, Applicant's clarified independent claims all contain clarified features/limitations of "using information of a scattered diagram of brightness of the first and second images." As previously discussed, Applicant's disclosed invention is characterized in that a defect of patterns is detected after first and second images are aligned within one pixel unit before brightness coincidence filtering and local gradation conversion.

Additionally, Applicant's disclosed and claimed invention also includes generating scatter diagrams indicating the brightness values of the images (see, *e.g.*, page 42, lines 9 *et seq.*). These scatter diagrams, with the thresholds generated by image data within a local region, effectively reduce false reports of detected images. Such an important feature/limitation of the present invention is not taught or suggested by the applied prior art.

In addition to the foregoing, the following additional remarks from Applicant's foreign representative are also submitted in support of traversal of the rejection and patentability of Applicant's claims.

According to the invention disclosed in the specification, there are comprised steps of aligning a detected image and a reference image with an accuracy of one pixel unit, adjusting a brightness of the both images, converting the gradations of both images, forming a difference image between the inspected image and the reference image, and locally detecting, as defects, portions at which the difference image exceeds a threshold.

In the Office Action, the Examiner considers that it is obvious to align a detected image and a reference image with an accuracy of one pixel unit, to adjust a brightness of the both images, and locally to convert the gradations of both images.

Accordingly, the independent claims have been clarified as how to set the threshold for detecting defects on the basis of the difference image by "using information of a scattered diagram of brightness of the first and second images." The features of generating a brightness scatter diagram from data of the detected image and the reference image to detect the defects as false report is prevented from being caused by using information of the scatter diagram, as described through the application, *e.g.*, from page 23, line 26 to page 28, line 25.

As described in the specification, a threshold is set for detecting the defects from the difference image on the basis of the information of the scatter diagram. The present invention defined in the independent claims now clarifies the limit to set the

threshold for detecting the defects. Accordingly, the relation between the scatter diagram and the threshold is so argued.

In view of the foregoing amendments, arguments and remarks, Applicant respectfully requests reconsideration and withdrawal of all rejections of the claims, all claims are deemed to be allowable, and this application is believed to be in condition to be passed to issue.

REQUEST FOR INTERVIEW

In the interest of expediting prosecution of the present application, Applicants respectfully request that an Examiner interview be scheduled and conducted. In accordance with such interview request, Applicants respectfully request that the Examiner, after review of the present Amendment, contact the undersigned local Washington, D.C. area attorney at the local Washington, D.C. telephone number (703) 312-6600 for scheduling an Examiner interview, or alternatively, refrain from issuing a further action in the above-identified application as the undersigned attorneys will be telephoning the Examiner shortly after the filing date of this Amendment in order to schedule an Examiner interview. Applicants thank the Examiner in advance for such considerations. In the event that this Amendment, in and of itself, is sufficient to place the application in condition for allowance, no Examiner interview may be necessary.

RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present application are without prejudice or disclaimer of any scope or subject matter.

Further, Applicant respectfully reserves all rights to file subsequent related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, *i.e.*, Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

EXAMINER INVITED TO TELEPHONE

The Examiner is invited to telephone the undersigned at the local D.C. area number 703-312-6600, to discuss an Examiner's Amendment or other suggested action for accelerating prosecution and moving the present application to allowance.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the application are in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

A Petition for Extension of Time is submitted concurrently herewith, as well as Form PTO-2038 authorizing payment of the requisite Petition fee. To whatever other

extent is actually necessary, Applicant respectfully petitions the Commissioner for an extension of time under 37 CFR §1.136. No additional claims fees are required for entry of this paper. Please charge any actual deficiency in fees to ATS&K Deposit Account No. 01-2135 (as Case No. 500.37149X00).

Respectfully submitted,



Melvin Kraus
Registration No. 22,466
ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 North Seventeenth Street, Suite 1800
Arlington, Virginia 22209-3873, USA
Telephone 703-312-6600
Facsimile 703-312-6666